D H E C
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C. Earl Hunter, Commissioner
Promoting and protecting the health of the public and the environment

September 11, 2008

The Honorable Mark Sanford
Governor of South Carolina
P. O. Box 12267
Columbia, SC 29211

Re: The Drinking Water Capacity Development Program Report to the Governor

Dear Governor Sanford:

Section 1420(c)(3) of the Safe Drinking Water Act (SDWA) requires that not later than two years after the date on which the State first adopts its capacity development strategy, and every three years thereafter, the Commissioner of the South Carolina Department of Health and Environmental Control shall submit to the Governor of South Carolina a report describing the efficacy of the strategy and the progress that has been made toward improving the technical, managerial and financial capacity of public water systems in the State.

Attached is South Carolina's Drinking Water Capacity Development Program Report to the Governor.

In addition to being available for review on the Bureau of Water website at www.scdhec.net/water, a copy of this report is being presented to the United States Environmental Protection Agency Region 4 Office in Atlanta, GA and to the Association of State Drinking Water Administrators in Washington, DC.

Should you have any questions or comments regarding this report, please direct those to David E. Wilson, Jr., P.E., Chief, Bureau of Water, at (803) 898-3712 or David C. Price, P.E., Assistant to the Director, Water Facilities Permitting Division, at (803) 898-3993.

Sincerely,

Earl

C. Earl Hunter
Commissioner

cc: Mr. Dale Froneberger, United States Environmental Protection Agency, Region 4
Ms. Bridget O'Grady, Association of State Drinking Water Administrators

CAPACITY DEVELOPMENT

for technical, managerial & financial viability of public water systems

Report to the Governor

on the Efficacy of

South Carolina's

Capacity Development Strategy

September 2008

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Introduction

The Federal Safe Drinking Water Act (SDWA) amendments of 1996 required that each state develop a capacity development strategy for improving the technical, managerial and financial capacity of public water systems in the state. The South Carolina Department of Health and Environmental Control (DHEC) actually began working with stakeholders in 1993 to develop this strategy. Over the next several years the stakeholders met to develop the strategy and revise it as new issues arose. The strategy was then submitted to and subsequently approved by the US Environmental Protection Agency (EPA). During the process of developing the capacity development strategy the stakeholders recommended the State Primary Drinking Water Regulations (SPDWR) be revised to provide DHEC with the regulatory authority to implement several goals outlined in the strategy. To review the strategy go to http://www.scdhec.gov/environment/water/docs/capdev.pdf.

Another requirement of the Federal SDWA is for each state to submit to its Governor a report outlining the efficacy of the State's capacity development strategy along with explanations of the progress made, since the program's inception, toward improving the technical, managerial and financial capacities of South Carolina's public water systems. This report must be submitted to the Governor every three years beginning with the first report due on September 30, 2002.

Paper copies of the 2002 Report to the Governor can be requested from Mark Noble at DHEC via email at noblejm@dhec.sc.gov. The 2005 report may be found on DHEC's web site at: http://www.scdhec.gov/environment/water/docs/2005CapDevReport.pdf .

The following is a summary of the goals and objectives of the strategy followed by a brief discussion of progress made toward improving the technical, managerial and financial capacity of public water systems in the state.

Goals and Objectives

The goal and objectives of South Carolina's capacity development can be summarized as follows:

1. Minimize the proliferation of small water systems and ensure that new systems demonstrate that they will have the capacity to be viable water systems

   Over the last several decades compliance rates for small water systems' monitoring programs have been much lower than larger water systems because the larger systems can take advantage of financial 'economies of scale' to execute effective monitoring programs. During the stakeholder meetings cases were pointed out where DHEC had approved small water

systems to serve new subdivisions or businesses when it would have been more feasible to connect the project to an existing water system that already had water lines adjacent to or near its site. In addition, many of these water systems did not have management or financial plans in place to promote their viability.

Since the SDWA already provided DHEC the authority to deny a construction permit for a new water system in cases where it is more feasible to connect to an existing water system or if the new water system cannot demonstrate viability, the stakeholders recommended these subsequent SPDWR revisions:

- Require applicants to evaluate the feasibility of connecting to an existing system; and,
- Require applicants for new water systems to submit a management plan and a multi-year financial plan demonstrating their capacity to consistently comply with the SDWA and the SPDWR.

This program has succeeded in meeting these goals. Since July 1, 1997 feasibility and viability reviews of new system applications have prevented approximately 50 percent of proposed new water systems from being constructed because it was either feasible to connect to an existing system or the applicant could not demonstrate the technical, managerial and/or financial capacity for the project.

Prior to the state's new capacity development initiatives most of these projects would have received construction permits and proliferated the number of small and non-viable water systems in South Carolina. Currently, all new water systems permitted since 1997 are in compliance with the SDWA.

2. Maintain a high compliance rate of bacteriological, chemical, and radionuclide monitoring by public water systems

DHEC's water quality monitoring program originated in the 1960s and was funded through state appropriations. In 1986 the Federal SDWA was amended to substantially increase the monitoring required for public water systems. The costs for this additional monitoring far exceeded the funds appropriated by the state legislature. South Carolina had two choices for complying with the new federal monitoring requirements: either require each water system to "self-monitor" for all parameters; or implement a monitoring fee program that would allow DHEC to continue its successful monitoring program therefore insuring a high monitoring compliance rate.

The cost of monitoring was not the only factor to consider when choosing between these two options. The complexity of the new federal monitoring requirements as well as the desire from the public to have a third party (i.e. DHEC) monitor the water systems were also important factors to consider.

Therefore, with the support of the regulated community a monitoring fee system was established and subsequently passed into regulation allowing DHEC to continue a successful monitoring program. As a result South Carolina's monitoring compliance rate has averaged over 98% since the inception of the program.

3. Maintain an effective construction permitting program

The State's construction permitting program is an important tool DHEC uses to help insure and improve the technical capacity of the new and existing public water systems. As mentioned

above DHEC uses this program to evaluate the technical, managerial and financial capacity of all proposed water systems prior to the system being constructed. The program is also used to insure the technical capacity of modifications or extensions to existing public water systems. This program is funded through a permit application fee for each construction project.

4. Maintain an effective sanitary survey program

DHEC's long-standing sanitary survey program assesses the technical and managerial capacities of public water systems and their capacities to provide their customers with potable and safe drinking water. Each EQC Region office has a dedicated staff of professionals who are working in the field with the water system managers to assess and correct deficiencies before those become compliance or enforcement problems. Central Office staff closely coordinate this program with Regions' staffs.

Because so many sanitary survey inspections are required by regulation to be conducted each year our regional staff does not always have enough time to provide adequate technical assistance during and as a follow-up to sanitary surveys. In 2004 DHEC began using the 2% technical assistance set-aside funds from the annual State Revolving Fund Capitalization Grants to fund a technical assistance team consisting of an accountant, an engineer and a licensed water systems operator to help small water systems improve their technical, managerial and financial capacity.

5. Establish an operating permit program

Amendments to the SPDWR in 1998 authorized DHEC to institute a program to issue an operating permit to each regulated public water system. Before an operating permit is issued a DHEC engineer evaluates the technical capacity of each system's source(s) of water, storage facilities and treatment facilities, where applicable. If the facilities are inadequate a special condition is included in the operating permit requiring the owner to upgrade the facilities as necessary to bring them into compliance with regulations.

Currently there are 620 active community water systems on DHEC inventory records; operating permits have been issued to 559 of those systems. During fiscal year 2009 operating permits will be issued to the remaining community systems.

An operating permit is also a non-transferable legally binding document that supports DHEC's efforts to prevent existing systems from being transferred to owners who lack the technical, managerial and financial capacities to consistently comply with the SDWA. Those applying to receive ownership of water systems must demonstrate, usually by submitting an approvable business plan, their abilities to properly operate the water system. Since this program's inception, several existing systems have been transferred to a nearby municipal system or the customers have simply installed private residential wells in cases where the proposed new owners could not demonstrate the capacity to operate and maintain a viable water system.

Each operating permit contains the special condition requiring the system to submit a business plan within six (6) months if the system is rated *unsatisfactory* as a result of a sanitary survey. The business plan must address correcting the deficiencies that led to that rating and include an implementation schedule (timeline) for the system's owner to implement necessary upgrades to bring the system back to compliance. To aid water systems in developing a business plan DHEC provides via its website a guidance document with examples and explanations of the information that comprises an approvable business plan: go to www.scdhec.gov/environment/water/docs/business.pdf.

The business planning process in conjunction with the operating permit program has proven to be successful in bringing unsatisfactory water systems back into SDWA compliance.

6. Encourage and facilitate the consolidation and regionalization of public water systems

Operations and maintenance costs for public water systems continue to rise along with the costs to construct new facilities; smaller systems, both municipal or privately owned, are increasingly having difficulties achieving and maintaining viability and compliance with regulatory requirements. Consolidating several smaller systems into a larger system or connecting a small system to a larger viable system are options DHEC sees as solutions for systems facing capacity issues. However, consolidations of or merging systems costs money.

Incentives to encourage systems to investigate these activities are available in the form or loans from the State Revolving Loan fund (SRF) and grants provided by the Budget and Control Board's Office of Local Government. In 2003 the SC State Revolving Loan Fund (SRF) initiated a special loan rate of one percent (1%) available to any viable water system willing to take ownership of a non-viable water system. As of 2008 only two systems have taken advantage of this special incentive rate. However, several water systems have received grant funds from the Budget and Control Board to connect and assume ownership of non-viable water systems thereby providing a permanent solution to a water supply problem.

One requirement DHEC made of the consultant involved in the Technical Assistance contract that ended in 2005 was to submit a Final Report and provide a list of water systems on a regional basis that would benefit from consolidating and/or regionalizing ownership and operational responsibilities. The consultant, Force & Associates, Inc. of Lexington, identified nine (9) possible consolidations/mergers of nearby systems based upon geography initially, but also on water requirements. The counties, listed in order of their perceived need for combining or merging systems, are Hampton, Allendale, Oconee, Sumter, Orangeburg, Fairfield, Chesterfield, Marlboro, Aiken and Dorchester. Local Councils of Government serving those areas were approached about this concept.

As a test case, DHEC is looking at Hampton County for consolidating its water systems, and has partnered with the Hampton County Administration and Low Country Council of Government (LCOG) to continue these efforts. In 2005 LCOG and DHEC partnered to obtain an Environmental Council of the States (ECOS) grant for funding a 'fence-line' study, or technical overview, of these systems: The conclusion was 11 of the 12 systems were basically non-viable and would benefit from consolidation.

To continue the project, a steering committee, comprised of the above entities and the consultant, whose purpose was to gauge the municipalities' interests in continuing this project was formed and funded from the SRF small water system technical assistance set-aside. The steering committee received Letters of Intent from six (6) of the municipalities – Brunson, Gifford, Estill, Varnville, Hampton and Scotia – and determined a business plan is needed to guide the next phase of the project, actual consolidation. The LCCOG is taking the lead to secure grant funds for a consultant to complete a viable business plan at this time.

7. Encourage and facilitate the local planning process and coordination between state and local governments

DHEC's SRF section, the SC Budget & Control Board's Office of Local Government and several local government agencies continue to resolve water system problems on a system-by-system basis; however this is not the most effective method to resolve such issues due to the resources and time required to do so. DHEC hopes efforts to stress the importance of consolidations and mergers to solve municipality capacity problems will be seen by other COG agencies as being viable solutions worth investigating. As noted in the 2005 report, the Section 208 Water Management Plan initiated in conjunction with the Clean Water Act might be a viable model for resolving drinking water issues.

In 2006 EPA published *System Partnership Solutions to Improve Public Health Protection, Volume II* highlighting several types of solutions for small systems facing technical, managerial and/or financial challenges. One small water system in Lexington County facing all the above challenges was highlighted: The solution involved DHEC, the Budget & Control Board, the SC Public Service Commission, and county and municipal governments coordinating to connect this privately owned water system to the nearby town system. This is an example of one of several successes that have occurred in SC when governmental agencies work together to solve problems facing their constituents.

8. Support public education initiatives for improving the technical, managerial and financial capacity of public water systems

Board Member Training: DHEC capacity development staff will soon become involved with the SC Rural Water Association small water system board member training initiative by assisting in structuring the program to provide better training in the technical, managerial and financial aspects of water system operations for their board members. Plans are for this training to be available to more water systems' board members by scheduling single system training sessions provided by RWA and DHEC staffs.

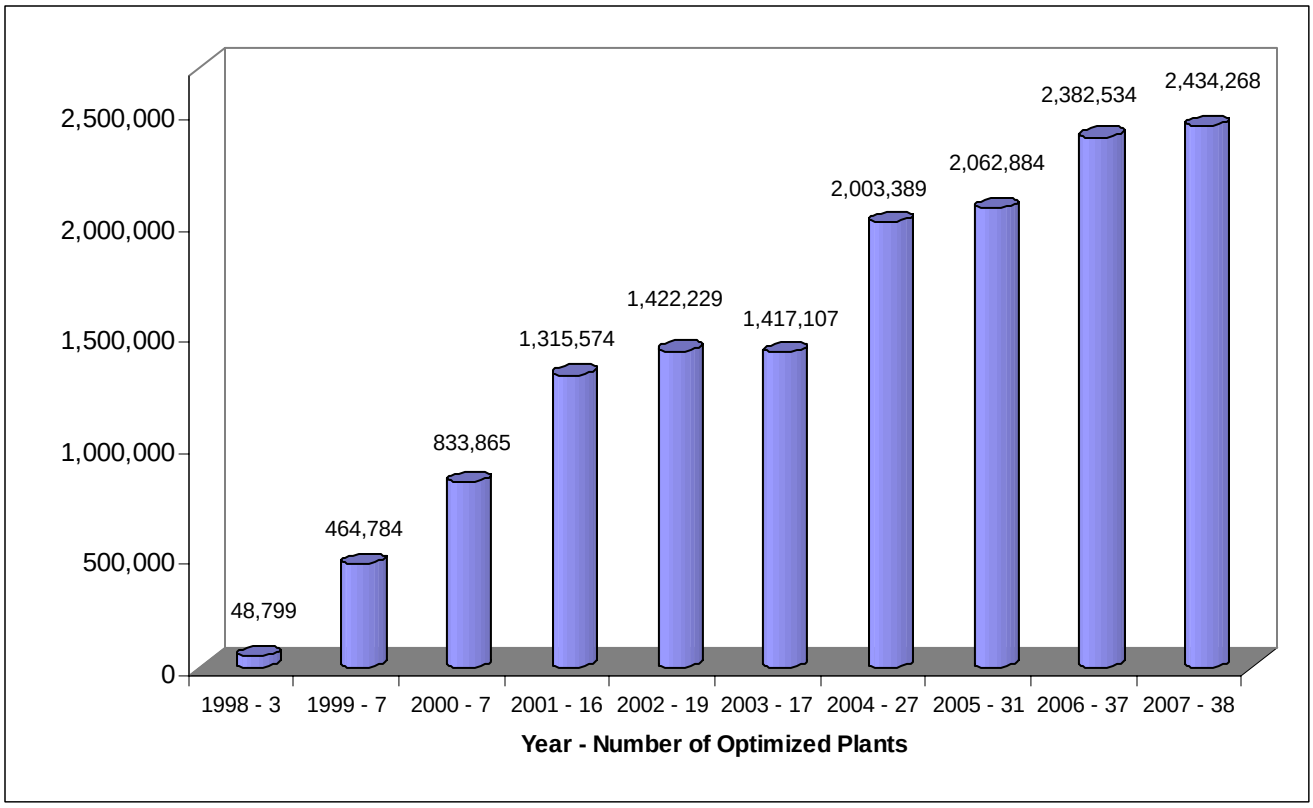
Operator Certification Training: DHEC applied for and received an Operator Certification Expense Reimbursement Grant form EPA to fund the training, testing and certification of eligible operators of small systems. DHEC contracted with Central Carolina Techinal College in Sumter to conduct training. The SC Labor, Licensing and Regulations Department (LLR) conducted the testing. This program funded the training for 389 small systems operators and the certification of 69 small system operators.

Area-Wide Optimization Program: (AWOP) was initiated by DHEC in 1997; this program's intent is to increase public health protection by optimizing performance of all surface water filtration plants in the state. Public water systems participate voluntarily in AWOP and the treatment goals exceed the current Drinking Water Standards of the SPDWR.

An impact of AWOP in South Carolina can be seen in the following chart that shows the dramatic increase in the number of citizens who receive their drinking water from an optimized water plant.

This chart shows the population served by optimized plants by year from AWOP's inception in 1998; the population served by optimized plants (i.e. those that met their settled & filtered goal) was 48,799 in 1998 but that number increased to over 2.4 million in 2007. Approximately 2.8 million people in South Carolina are now being supplied with drinking water from surface water plants; and approximately 85% of these people are receiving drinking water from a plant optimized for microbial protection.

South Carolina Population Served By Optimized Plants



Conclusion

DHEC continues to urge consolidations of smaller municipal systems and mergers of small systems with larger municipal systems when such changes are feasible. Reducing the number of smaller systems will lead to more citizens receiving their water from better and more SDWA compliant public water systems, thereby improving the health of more South Carolinians.

The next Report to the Governor will be due September 30, 2011.